



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,409	08/24/2004	Daisuke Kamiya	7378/84103	7763
42798	7590	03/17/2008		
FITCH, EVEN, TABIN & FLANNERY P. O. BOX 18415 WASHINGTON, DC 20036				
EXAMINER				
TRAN, THAO T				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
03/17/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/505,409

Applicant(s)

KAMIYA ET AL.

Examiner

Thao T. Tran

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This is in response to Applicants' Reply filed on 12/04/2007
2. Claims 1-3, 5-7, and 9-12 are currently pending in this application. Claims 9-12 have been withdrawn as directed to a nonelected invention as indicated in the prior Office action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. (US Pat. 6,559,231) or Okazaki et al. (US Pat. 6,645,617).

Hasegawa discloses a pressure sensitive adhesive sheet for coating a substrate, the pressure sensitive adhesive composition comprising a light curable copolymer (I) obtained by copolymerizing an ethylenically unsaturated monomer (a) having a maleimide group, an ethylenically unsaturated monomer (b) having a carbonyl group, and other ethylenically unsaturated monomer (c) (see abstract; col. 2, ln. 26-32).

The copolymer (I) of Hasegawa has a molecular weight of 1,000 to 1,000,000 and preferably 10,000 to 500,000 (see col. 7, ln. 9-12), overlapping the presently claimed range. Therefore, it would have been obvious to one of ordinary skill in the art to have selected the copolymer having a lower range of molecular weight, depending upon user's preference and intended use, absence of evidence to the contrary.

Monomer (a) having a maleimide group is a compound having Formula (1), wherein R1 and R2 each can be independently a hydrogen or an alkyl group (see col. 2, ln. 32-67), which reads on the formula in instant claims 1 and 5. Monomer (a) is an imide compound including imide (meth)acrylate that is produced from an acid anhydride, amino alcohol, and (meth)acrylic acid (ester) (see col. 3, ln. 39-41). Monomer (c) includes alkyl (meth)acrylate and hydroxyalkyl (meth)acrylate (see col. 4, ln. 21-29). Hasegawa further teaches the amount of monomer (a) is 4-20%, monomer (b) 2-25%, and monomer (c) 55-94% (see col. 4, ln. 45-48). Thus, copolymer (I) would inherently have a polyester backbone.

Okazaki discloses a pressure sensitive adhesive composition curable with actinic energy ray and pressure sensitive sheet on a substrate (see abstract; col. 1, ln. 12-19). The pressure sensitive adhesive composition comprises a copolymer comprising 0.1-3% by weight of an imide (meth)acrylate and 97-99.9% by weight of an unsaturated monomer (see col. 3, ln. 54-59). The imide (meth)acrylate has a chemical formula (1), wherein R1 and R1 can be independently a hydrogen or alkyl groups (see col. 2, ln. 12-67). The unsaturated monomer includes (meth)acrylate, unsaturated carboxylic acid, vinyl ester, monoalkyl esters of unsaturated dicarboxylic acid (see col. 4, ln. 11-21). Thus, the copolymer would inherently have a polyester backbone.

The copolymer of Okazaki has a molecular weight preferably in the range of 10,000-1,000,000 (see col. 5, ln. 45-52), overlapping the presently claimed range. Therefore, it would have been obvious to one of ordinary skill in the art to have selected the copolymer having a lower range of molecular weight, depending upon user's preference and intended use, absence of evidence to the contrary.

Response to Arguments

5. Applicant's arguments filed on 12/04/2007 have been fully considered but they are not persuasive.

Throughout the Remark, Applicants contend that neither Hasegawa nor Okazaki teaches a compound being liquid at ordinary temperature and having the claimed range of molecular weight. (Note that in the specification, paragraph [0025], Applicants define ordinary temperature as 25°C). However, the maleic-containing compounds in Hasegawa and Okazaki, each have a molecular weight overlapping the instantly claimed range. And as known in the art, whether a compound is liquid or solid at room temperature would depend on various parameters including its molecular weight. The smaller the molecular weight, the more liquid the compound is. Thus, by teaching a molecular weight range overlapping that in the instantly claimed range, the references also teach the claimed property, i.e. a maleic-containing compound that is liquid at ordinary temperature.

With respect to Applicants' argument that neither reference teaches a compound having terminal maleic groups, it is noted that in Okazaki, at least compound (1) shows a maleic terminal group. And while Hasagawa does not specify the compound having a maleic terminal group, the reference teaches the compound being formed from three monomers in which one contains the maleic group. Although there is no mention whether the compound would specifically have a maleic terminal group, it is known in the art that different polymers would be formed during polymerization, among which one type would have the maleic terminal groups.

It is further noted that in contrast to Applicants' argument, Hasegawa teaches the maleic-containing compound (I) being cured by irradiation with light (see col. 2, ln. 29-31).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thao T. Tran/
Primary Examiner, Art Unit 1794

tt